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998485

NPIC/P&DS/D/6-708
7 January 1966

MEMORANDUM FOR: Chief, Development Branch, P&DS

THROUGH: [redacted] 25X1

SUBJECT: Feasibility Study of Multiple Image Integration Viewer-Printer

REFERENCE: Project #998485, [redacted] 25X1

1. Attached is [redacted] Technical Report 65-9225-1, dated 6 December 1965 and a letter from [redacted] suggesting a change in contract to provide additional incentives. 25X1 25X1

2. The overall report is very good and it appears that [redacted] will be able to incorporate all of the features and capabilities required in this system. Basically the system can handle three film chips up to 9 1/2 inches in size, one channel is selected as a master and the other two channels correlated and transformed geometrically by an electronic system. The integrated image can be printed on film at high resolution in less than one second. One of the important features is the gamma control and shadow suppression. This was demonstrated in a breadboard attachment to an Ares Viewer during a monitor trip to the contractors facility. This feature will prove extremely valuable in working with low contrast images. 25X1

This system will not automatically correlate relief displacements but [redacted] is researching this higher order image transformation under another project and our system will have the add-on capability in the event it is successful. 25X1

3. The only reservation I have at this time is in the image area viewed at input. The proposed sizes are: 0.25 inches square for 12x magnification. 0.45 inches square for 6.7x and 0.80 inches square for 3.7x. While this appears to be satisfactory for most photography, it may be difficult with large scale low contrast imagery. The final use of the recorded image will have to be considered in selecting the spot size at the film plane. If the recorded film is to be used in reports to indicate the integrated image in relation to its surroundings (radar at airfield, control house at missile site, cooling towers at steel plant, etc.), it might be better to have a larger spot size at the film plane and settle for lower magnification and resolution on the recorded film. Conversely, if we are only interested in integrating small film sizes, we should follow the sizes proposed by [redacted] I tend to lean toward the sizes they propose but I am interested in hearing your viewpoint. 25X1

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4. If we accept the input image areas as proposed in this feasibility study, I feel that the overall size of the viewer-printer can be reduced. If the maximum size spot to be used in the input channels is 0.80 inches square, there seems to be little need of having each input channel platen large enough to accommodate 9 1/2 inch chips. A more realistic platen size would probably be 4 1/2 inches thus requiring less translating movement resulting in a decreased overall length and width.

5. [redacted] letter dated 8 December 1965 (Attachment 2) proposes a change in [redacted] to include three performance incentives in addition to the cost incentive provisions. While this is a Logistics Branch responsibility, it's possibilities are quite interesting and are worth studying. 25X1 25X1

6. Any recommendations you may have as to the most appropriate film image spot size and overall size of the system would be appreciated. I am also most interested in finding out your viewpoint on the proposed changes in the contract and any course of action you may recommend.

7. Once these points have been satisfactorily resolved, I recommend that [redacted] be instructed to proceed with Phase II or the fabrication stage of the contract. 25X1

[redacted] 25X1

Attachment: 1 - [redacted] Report 65-9225-1 25X1
2 - [redacted] letter on Project 9225, dated 8 Dec 1965

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